



MARKET TECHNICIANS ASSOCIATION

Technically Speaking

Letter from the Editor

This month's newsletter focuses on the work of only two technicians. Ralph Vince defined the science of money management and offers some additional insights to our readers. Harry Dent approaches the markets from a unique viewpoint and offers our readers a lesson in thinking outside the box.

These types of articles are much longer than we could have presented a year ago when we were restricted to our paper format. The charts presented are also of a higher quality. We hope you find this to be useful. And as always, please let us know what you think.

Sincerely,

Mike Carr, CMT



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The Leverage Space Portfolio Model

by Ralph Vince

Editor's Note: Ralph Vince was the first to precisely define the importance of money management to trading success. His pioneering work in position sizing created a new area within the Body of Knowledge of technical analysis. He has continued to build on his original insights and in this article, he expands on the idea of position sizing and extends the concept to portfolio management.

This article attempts to introduce readers to a superior portfolio model, herein referred to as "The Leverage Space Model." The model has, as its starting point, the Kelly criterion, which is to maximize the expected value of the logarithm of wealth, sometimes stated as "maximizing expected logarithmic utility".

We proceed to perform this for multiple, simultaneous components (i.e., maximizing the logarithm of wealth given the synergies of portfolio components). Finally, this growth aspect is juxtaposed to the risk aspect, which in the case of The Leverage Space Model, is the real world risk metric of drawdown.

In other words, The Leverage Space Model seeks to maximize geometric growth within a given drawdown constraint. This is in stark contrast to the more conventional models which seek to maximize (arithmetic) return versus variance in those returns.

This article introduces The Leverage Space Model and presents the case for it; an attempt has been made therefore to do this in an illustrative manner, focusing on concepts rather than their mathematical construction. The latter, the mathematics behind the article, can be found in "The Handbook of Portfolio Mathematics," Ralph Vince, (New York: John Wiley & Sons, 2007).

Part I – The Single Component Case

We begin with the single component case. Please look upon what is to be presented here as not a theory. It's provable, and it's at work upon you, just as gravity itself is, whether you acknowledge it or not. Intuitively, you likely sense these things to be presented here, but everyone is and has been feeling their way along in the dark, sensing these things but unable to have them illuminated.

Once illuminated, I think you will say to yourself, "Ah, yes, I see what I'm doing now." So this gives you a framework, a paradigm, to look at your actions and better understand what you're doing. In other words, though we are following a path that leads to a (superior) portfolio model, we are always along a path that presents a paradigm for looking at what we are doing in the markets.

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New Geopolitical, Commodity, and Recurring Cycles

By Harry S. Dent, Jr.

New Geopolitical, Commodity, and Recurring Cycles

By Harry S. Dent, Jr.

New York Times bestselling author

Adapted from *The Great Depression Ahead* (Free Press, 2009)

For those familiar with our work, this article will be a condensed explanation of many of the recurring economic and market cycles we study. Our primary focus has always been demographic trends – in an economy that is 70% consumer spending, it only makes sense to study how age affects our spending habits. But given the extreme volatility of recent years, it became obvious to us that there were other cyclical factors at work as well, and these will be the focus of this article.

One of the biggest developments of the mid 2000s was the raging bull market oil and commodity prices. We are currently at the tail end of a commodity bubble that has rivaled that of the 1970s even when adjusted for inflation. This caused us to review commodity cycles and our old past Kondratieff Wave research, and we found that there is actually a regular 29- to 30-year cycle in commodities over the past 200 years. **Chart 1** shows this 29- to 30-year Commodity Cycle over the last century, with regular peaks in 1920, 1951, and 1980. Previous peaks occurred in 1834, 1864, and 1892. The next peak would be due between late 2009 and mid 2010, though it appears that the credit meltdown of 2007-2008 caused this cycle to peak a little earlier.

(Click Image to Enlarge)

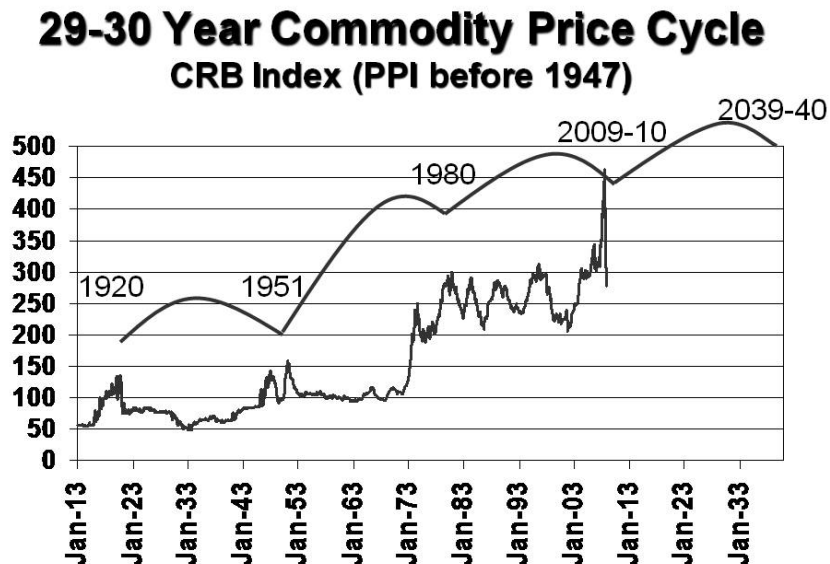


Chart 1: 29- to 30-Year Commodity Cycle

This cycle represents an important addition to our recurring cycles. Most past booms, like the 1920s, 1950s to 1960s, and 1980s to 1990s did not include commodity bubbles, nor significant inflation pressures, because strong productivity gains from rising generational and technology trends largely neutralized this.

The New 32- to 36-Year Geopolitical Cycle

Perhaps the most important new cycle we have added is a new Geopolitical Cycle. Every 34 - 46 years, we tend to see alternating periods of 16 to 18 years when the general geopolitical trends and environment are first favorable for stocks and valuations and then unfavorable. This cycle has a much bigger impact than the 29- to 30-year Commodity Cycle on developed countries such as the US, given that commodity prices are such a small percent of GDP in modern times. **Chart 2** shows this cycle over the last century, with peaks in stocks and valuations in 1929, 1965, and 2000. The next cycle peak will come around 2035-2036, in line with some important peaks in global demographic trends for China, Russia and Eastern Europe, and Europe. Past cycle peaks in the century before came around 1834, 1866, and 1898. The only major peak that came off cycle would have been the stock market peak in early 1873, which was followed by a depression. There was a major stock market peak between late 1834 and early 1835 that led to a major depression that was right in line with this cycle.

(Click Image to Enlarge)

34-36 Yr. Geopolitical Cycle Dow Industrials

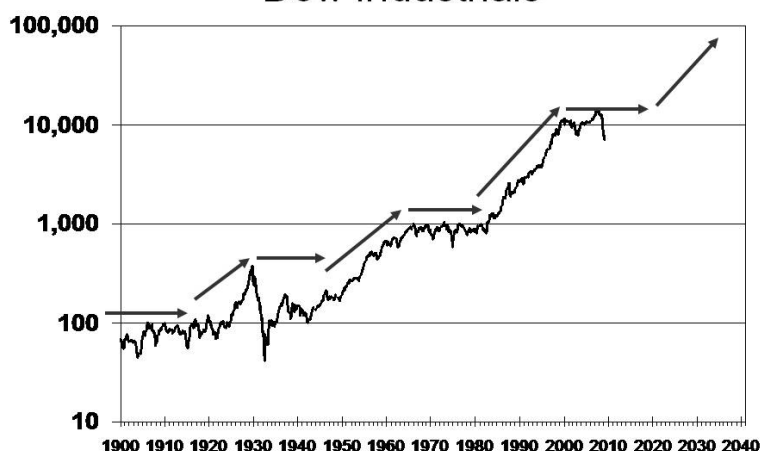


Chart 2: 32- to 36-Year Geopolitical Cycle

In 2006, we started feeling as if the geopolitical trends were becoming like the 1960s and 1970s. There was the Cuban Missile Crisis, JFK was assassinated, the Vietnam War escalated yet we couldn't win it, and Bobby Kennedy and Martin Luther King Jr. were assassinated. There was the recession of 1970 and a worse recession from 1972 into early 1975 (with the greatest crash in stocks since the early 1930s). The Cold War escalated, with creeping inflation that turned into the largest inflation surge in modern history into 1980. Finally, between 1980 and early 1983, we saw the worst recession and unemployment since the 1930s. The economy continued to be strong due to demographic and technology trends into the late 1960s, but stocks advanced much more slowly than they did in the 1950s and early 1960s. During 1961–1962, stock valuations or P/E ratios actually peaked at levels similar to those in 1929 and then declined even in the boom. Overall, the last unfavorable cycle was from around 1965 to 1982. We experienced a favorable cycle again from 1983 to 2000, with a global boom from rising productivity and falling inflation. The next unfavorable cycle began in 2001 and will continue into 2018–2019.

In 2001, the tech bubble started to crash more seriously. Then there was 9/11, the big event that has changed the environment for North America and Europe ever since. The second Iraq War was aimed at the wrong enemy and has gone as badly as the Vietnam War, and now it looks hard to pull out gracefully. There have been continued terrorist attacks around the world, and we think that the U.S. is due to be hit between 2009 and 2010 on a pretty regular terrorist cycle every 8 to 9 years (1993, first World Trade Center bomb; 2001, the major 9/11 attack; 2009–2010, a greater attack on the US?). This geopolitical environment of heightened risks clearly was a part of the bubble in oil prices, but more so was the rapid expansion of the more commodity-intensive emerging countries, such as China, India, and Brazil. This one new cycle alone caused us to cut our stock estimates for the peak of the boom in half in September 2006.

This Geopolitical Cycle continues to point downward into 2018 or 2019. Expect world events and terrorism to get worse, not better. Expect stocks to continue to underperform their earnings and valuation trends of the 1980s and 1990s, even more so in the extended slowdown from 2010 into about 2023. Expect the commodity bubble to first create higher tensions in the Middle East, and then its collapse to create greater problems and unrest in the Middle East and the Third World that could then create an even greater backlash against North America and Europe.

The next global boom on this cycle would come between approximately 2020 and 2035 or 2036. Stocks could bottom by 2020, even though demographic trends in the U.S. don't start to point upward again until at least 2023.

These two new cycles have greatly reshaped our forecasts for the present decade, and they occur more in the time frames of our 40-year Generation or Spending Wave and our technology and S-curve cycles. There are some important long-term cycles that bring additional perspective to the magnitude of today's advances and progress that we will cover next. Then we will look at some intermediate to shorter-term cycles that will be important to predicting how this Bubble Boom will unwind in the next few years and decade ahead.

Shorter-term Recurring Cycles: 20-Year, Decennial, 4-Year, and Annual Cycles

The 20-Year and 40-Year Cycle

We noted in our previous book, *The Next Great Bubble Boom*, that major long-term bottoms in the stock market have occurred about every 20 years, like 1903, 1942, 1982, and next around 2022–2023. This cycle may simply be a sub cycle of the 40-year Generation Cycle or Spending Wave in modern times, but we can see it in **Chart 3**. The 20-year bottoms every 40 years tend to lead to broader booms again. Even though we may see the worst of the next crash into late 2010 or 2012, we are not likely to see another sustained upward bull market cycle until late 2022.

(Click Image to Enlarge)

20- and 40-Year Cycles Dow 1900-2025*

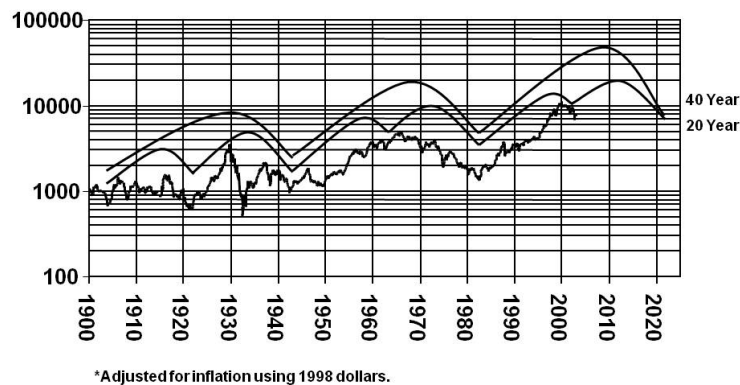


Chart 3: 20-Year and 40-Year Cycles

The Most Powerful Decennial Cycle

After the 2000–2002 crash proved to be more severe than we originally expected, given such strong demographic and technology trends into 2008–2009, we began to focus more on the Decennial Cycle in stocks and the economy, which has been documented for years by Ned Davis. **Chart 4** shows the average gains in the stock market (Dow) over the last century. The markets tend to peak late in the ninth year, correct into the middle part of the second year, and then recoup modestly into the end of the fourth year. Most or all of the net gains tend to then occur in the second half of the decade.

(Click Image to Enlarge)

Decennial Pattern Since 1900 Dow Industrials - Average 10-Year Decennial Pattern

Weekly Data 1/6/1900-12/31/1999

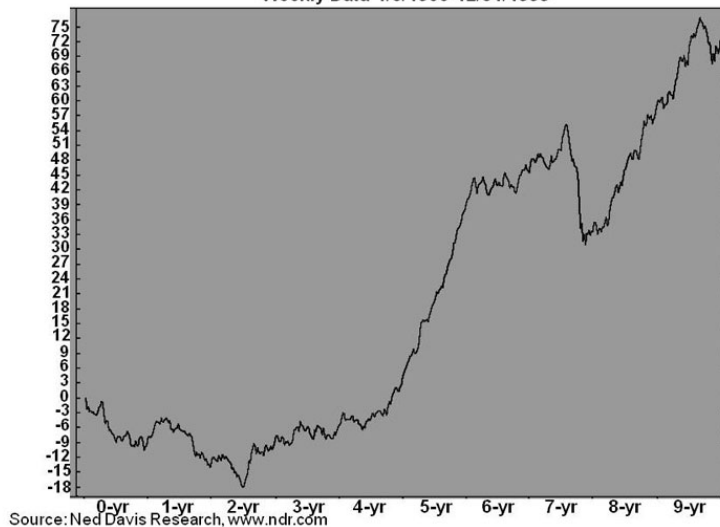


Chart 4: Decennial Cycle

We back tested this cycle over the last century. By getting defensive in the first 2.5 years of every decade, investors could have created greater risk/return benefits than any other cycle, including our Spending Wave. This cycle alone strongly suggests that investors and businesses should be more defensive between late 2009 and mid 2012.

What is behind this cycle? It seems that there is a natural corporate and real estate planning cycle in which companies have 10-year plans to achieve new targets by the end of the decade. They all then tend to expand—and over expand—into the end of each decade and then have to consolidate or shake out in the early years of the decade to follow. Whatever the cause, this cycle has been one of the most consistent in the past century, and we should continue to take it into account unless it fails and continues to fail miserably over a few decades.

Although this long-term average was affected substantially by the great crash of late 1929 to mid 1932 and also by the extreme 1987 crash, we still see a strong consistency over time. The greatest stock crashes outside of 1973–1974 have occurred in the early years of the decades: late 1919 to early 1922; late 1929 to mid 1932, late 1937 to early 1942; 1960–1962; 1970; 1980–1982; 1990, and early 2000 to late 2002. Even the crash of 1973–1974 occurred in the first half of the decade and was preceded by a substantial crash in 1970. Similarly, the greatest bubbles have occurred in the second half of the decade: 1914–1919; 1925–1929; 1985–1989 (U.S. and, more so, Japan); 1995 to early 2000, and 2005–2009 in emerging markets and commodities today. In U.S. history there have been no overall down periods in the second half of any decade in the 20th century, including in broader bear markets in the 1970s and 1930s. As an investor, you still could have made money from late 1934 to late 1939 and late 1974 to late 1979 in the stock markets!

The Most Consistent 4-Year Presidential Cycle

It is well known among most stock analysts that the markets tend to see minor to substantial corrections every 4 years during the mid-term election cycles in the U.S., with stocks tending to hit natural intermediate-term bottoms between the summer and fall of years like 1962, 1966, 1970, 1974, 1978, 1982, 1986, 1990, 1994, 1998, 2002, 2006—and next—mid to late 2010! This cycle has been documented best by Ned Davis, as is shown in **Chart 5**.

(Click Image to Enlarge)

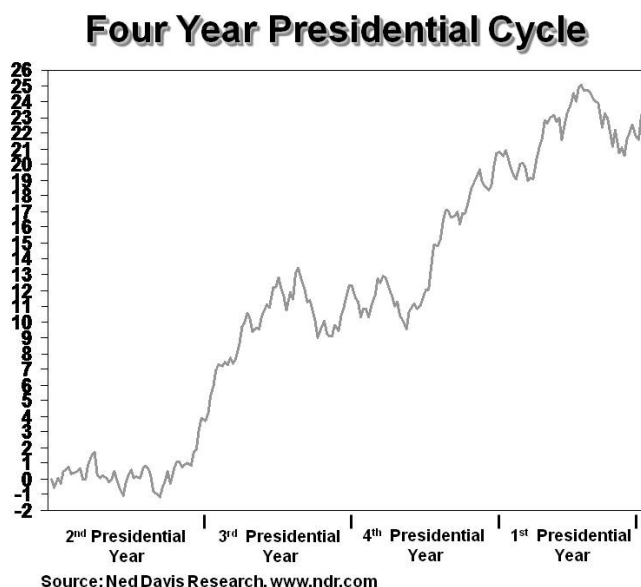


Chart 5: The 4-Year Presidential Cycle

What is behind this cycle? The Federal Reserve and U.S. government tend to be more stimulative in their monetary and fiscal policies building up to the presidential elections to support the present administration or party—and then have to deal with the excesses by use of tightening and cutbacks into the mid-term elections when there is less at stake. Investors also tend to get optimistic in the first year of a Presidency with so many promises during the election and then realize that not much will change by the second year. There may be other influences that we have not yet identified, but this is another consistent cycle.

A New 3.3-Year Cycle?

Robert Prechter, author of *Conquer the Crash* (Wiley, 2002), in his newsletter *The Elliott Wave Theorist*, has postulated a new 3.3-year cycle that may have merit. The last one bottomed in mid to late 1998 with that sharp correction, then the next one hit in late 2001 right near 9/11, then very early 2005. The last cycle bottom would have hit around the March bottom in 2008. The next cycles would bottom around mid 2011, late 2014, very early 2018 and early to mid 2021. This cycle would suggest that it could be mid 2011 before the stock market bounces strongly from the 2009 to 2010 great crash, and it would give more wait to a low and buying opportunity in late 2014 – and even suggest a possible ultimate low in late 2014 with the 3.3- and 4-year cycles coinciding. But this cycle is not as proven as the 4 –year and Decennial, so we will give them more weight for now.

The 8.6-Year Armstrong Cycle

Another cycle that we have tracked historically is the 8.6-Year Armstrong Cycle in **Chart 6**. This cycle oscillates more between primary and secondary momentum moves up and down. It is supposed to correlate more with global business cycles, but has correlated closer with the stock market in recent times. Here you can see that a primary momentum top occurred in early 2007 – and we saw a series of increasing stock market corrections to follow into March of 2007, August of 2007, November of 2007 and March of 2008. The secondary momentum bottom was due to bottom on March 22, 2008, just 5 days from the actual bottom on March 17. The next secondary momentum top would be due for mid April of 2009 right near when the Annual Cycle is due to peak by May and then the primary bottom occurs in mid 2011 when we expect the worst economy and unemployment to follow the sharp crash of 2009 – 2010. The next primary bottom in this cycle would occur in early 2020 near the bottom of our Geopolitical Cycle. Given that $8.6 \times 4 = 34$, we wonder if these two cycles are related.

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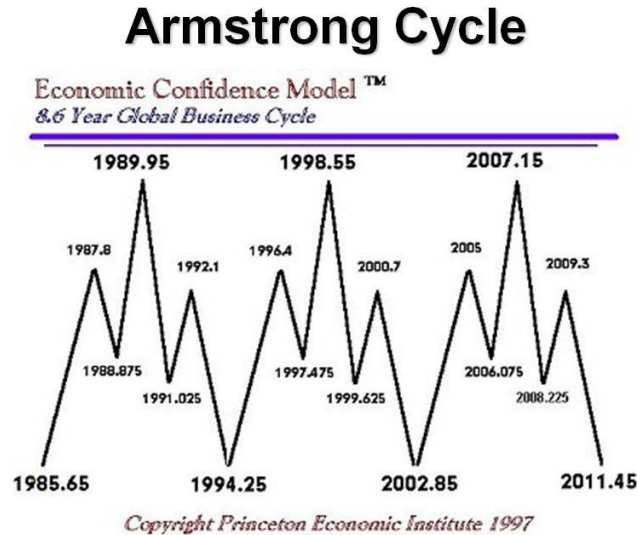


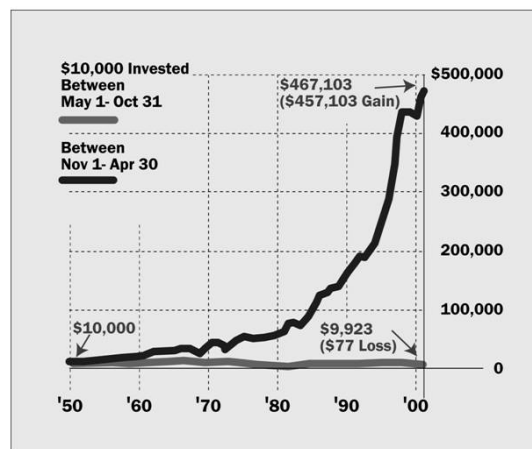
Chart 6: The 8.6-Year Armstrong Cycle

The Annual Cycle: Sell in May, Buy in October

The stock market tends to have an annual cycle that is less consistent but over time is quite powerful. Because investors receive more dividends in the early part of each year and then receive tax refunds into April or May, there tend to be greater flows of funds into the stock market between the tax selling season (to take advantage of losses between October and December) and April or May of each year. The markets tend to have less relative cash flow from May or June to September or October. There is also a tendency to sell losing stocks towards the end of the year (September/October) for tax losses and then to re buy in January onwards. **Chart 7** from Ned Davis shows that over the last century, almost all of the stock gains on average have come from May to October, with November through April pretty much a wash.

(Click Image to Enlarge)

Annual Cycle in Stocks



Source: Barron's, Sept. 16, 2002, pg 19; The Hirsch Organization

Chart 7: Annual Cycle in Stocks

This cycle suggests that the next short-term cycle peak has already come with the recent peaks—although the Decennial and 4-year cycles point more toward late 2009.

Seasonal 4-Month Cycles

We also tend to see cycles within every year with corrections around late January to February, late May to June and late September to October.

Timing of these cycles tends to vary but occurs on average around three times a year or every four months. The last such cycle occurred from late May to mid June 2008 and late September to mid October 2008 and would be due to hit again between mid January and early February 2009 and from early May to early June 2009, September to early October 2009, January 2010, and so on.

If we put together all of our long-term and short-term fundamental and recurring cycles we can start to integrate the most likely scenarios for the great crash ahead and the depression to follow.

Likely Stock and Economic Scenarios Ahead

Let's review the summary principles from this chapter:

1. Since our last book, *The Next Great Bubble Boom*, we have added two important long term cycles: The 32 – 36-Year Geopolitical and the 29- 30-Year Commodity Cycles.
2. The Geopolitical Cycle has caused US stocks to under perform their trends in the 1990s by 50%. But this means less of a bubble to deflate between 2010 and 2012.
3. The 29 – 30-Year Commodity Cycle is on a perfect collision course with the peak of our Spending Wave around late 2009. This is not typical. The last cycle peaked just before this great boom began in 1980 and the previous one partway into the 1942 – 1968 bull market in 1951.
4. The Commodity Bubble will be the key trigger for the next crash as it will eventually slow emerging countries and not just developed countries. Oil is likely to hit \$200 plus or minus around late 2009 and by mid 2010 at the latest.
5. The largely consistent Decennial Cycle points down from late 2009 into mid 2012 and the next great stock crash is likely to bottom long term and reverse by then. The next Decennial Cycle would hit from late 2019 to mid 2022, but our Geopolitical Cycle will be pointing up from 2020 forward and may offset that cycle a bit.
6. The 4-Year Presidential Cycle also points down from late 2009 into 2010 making that the most dangerous period with all of our intermediate and long term cycles pointing down.
7. The 4-Year Cycle also bottoms in mid to late 2014, mid to late 2018 and mid to late 2022. These will likely represent advantageous buying opportunities for stocks. With the conjunction of a new 3.3-year cycle, late 2014 could also represent a long term bottom in an alternative scenario, instead of around mid to late 2012.
8. If we take all of our cycles into account, the greatest near term buy opportunity for stocks is likely to come in mid to late 2012, and possibly earlier between late 2010 and mid 2011. The greatest long term buy opportunity is likely to come between late 2019/early 2020 and mid to late 2022. Late 2014 should mark a key buying opportunity intermediate term.

Harry Dent received his MBA from Harvard Business School, where he was a Baker Scholar and was elected to the Century Club for leadership excellence. Since 1988 he has been speaking to executives, financial advisors and investors around the world. He has appeared on "Good Morning America", PBS, CNBC, CNN/FN, and has been featured in Barron's, Investor's Business Daily, Entrepreneur, Fortune, Success, US News and World Report, Business Week, The Wall Street Journal, American Demographics and Omni.



While at Bain & Company he worked as a consultant with several Fortune 100 companies. He has also been CEO of several entrepreneurial growth companies and an investor in new ventures. A frequent speaker on economic trends, Mr. Dent educates clients and partners on The Dent Method and provides strategic vision for asset allocation and investment selection.

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An Insight on Mathematical Expectation

by Ralph Vince

An excerpt from *Reconciling Portfolio Management Strategies and Economic Theory*

The Mathematical Expectation (ME), is simply the sum of the products of the probabilities and payoffs of all the ways something might turn out:

$$ME = \sum_{i=1}^n (P_i * A_i)$$

Where:

P_i = The probability associated with the i^{th} outcome

A_i = The result of the i^{th} outcome
 n = The total number of possible outcomes

For example, assume we toss a coin, winning two units for heads and if it's tails we lose one unit, leaving two possible outcomes, +2 and -1, each with a probability of 0.5.

An ME of 0 is said to be a "fair" gamble. If ME is positive, it is said to be a favorable gamble, and if negative, a losing gamble. Note *that in a game with a negative ME (most gambling games), the probability of going broke approaches certainty as you continue to play.*

Mathematical Expectation is a cornerstone to our story. Not only is it a cornerstone to gambling theory, it is also a cornerstone to principles in Game Theory, wherein payoff matrices are often assessed based on Mathematical Expectation, as well as the discipline known as Economic Theory. Repeatedly in Economic Theory we see the notion of Mathematical Expectation transformed by the theory posited.

However prevalent and persistent the notion of Mathematical Expectation, it must be looked at and used with the lens of a given horizon, a given lifespan. Frequently, viable methods are disregarded by otherwise-intelligent men because they show a negative Mathematical Expectation (and vice-versa), indicating a misunderstanding of the basic concept of Mathematical Expectation.

By way of example, let's assume a given lottery is played once a week and you are going to bet \$1 a week. Let us further assume you plan to play for 50 years, $52 \times 50 = 2600$ plays.

Now let's say that this lottery has a one in two million chance of winning a \$1,000,000 jackpot (this is for mere illustrative purposes, most lotteries having much lower probabilities of winning. "Powerball," as presently played in the US has less than a 1 in 195,000,000 chance of winning its jackpot). We see a negative expectation in our example:

$$1/2,000,000 \times 1,000,000 + 1,999,999/2,000,000 \times -1 = -0.4999995$$

We expect to lose -\$0.4999995 per week, on average, or -\$1300 over fifty years, $2600 \times -0.4999995 = -\$1300$.

Mathematical Expectation, however, is simply the "average," outcome, i.e. the mean of this distribution of the ways the future plays might turn out. In the instant case, we are discussing the outcome of 2600 plays taken from a pool of two million possible plays, allowing for sample and replacement. The probability of seeing the single winning play in any randomly chosen one is:

$$1/2,000,000 \times 2600 = \\ .0000005 \times 2600 = .0013$$

From this, we can say that $(1 - .0013 = .9987)$ 99.87% of the people who play this lottery every week for the next fifty years will lose \$2,600. About 1/8th of 1% (.0013) will win one million dollars (netting $1,000,000 - 2,600 = \$997,400$). Clearly the mode of the distribution of outcomes for these 2600 plays is to lose \$2,600, even though the mean, as given by the Mathematical Expectation, is to lose \$1,300.

Now, let's reverse things. Suppose we have 1 chance in a million of winning two million. Now our Mathematical Expectation is:

$$1/1,000,000 \times 2,000,000 + 999,999/1,000,000 \times -1 = 1.000001$$

A positive expectation. If our sole criteria was to find a positive expectation, you would think we should accept this gamble. However, now the probability of seeing the single winning play in any randomly chosen 2600 is:

$$1/1,000,000 \times 2600 = \\ .000001 \times 2600 = .0026$$

In this positive expectation game, we can expect 99.74% of the people who play this over the next fifty years to lose \$2,600. So is this positive expectation game a "good bet?" One you would play expecting to make \$1.000001 every week?

To drive home this important point we shall reverse the parameters of this game one more time. Assume a lottery wherein you are given \$1 every week, with a one in one million chance of losing two million. The Mathematical Expectation then is:

$$999,999/1,000,000 \times 1 + 1/1,000,000 \times -2,000,000 = -1.000001$$

We expect to lose -1.000001 per week, on average, playing this lottery (losing -\$2,600 over the fifty years).

Do we play this game, accept this proposition, given its negative Mathematical Expectation? Consider the probability that the 2600 weeks we play this for will see the two million loss:

$$1/1,000,000 \times 2600 = \\ 0.000001 \times 2600 = .0026$$

We would expect that 99.74% ($1 - .0026$) of the people who play this game never see the two million loss. Instead, they will be given a dollar every week for 2600 weeks. About 399 out of every 400 people who play this game will not see the one in a million chance of losing two million over the course of 2600 plays.

I trace out a path through 3D space not only of the places I go, but on a planet which revolves roughly once every 24 hours, about a heliocentric orbit of a period of roughly $365 \frac{1}{4}$ days, in a solar system that is migrating through a galaxy, in a galaxy that is migrating through a universe which

itself is expanding.

Within this universe is an arbitrary-sized chunk of matter, making its own tangled path through 3D space. There is a point in time where my head and this object will attempt to occupy the same location in 3D space. The longer I live, the more certain I will see that moment.

Will I live long enough to see that moment? Likely not. That bet is a sure thing however, its expectation approaches 1.0 as the length of my life approaches infinity. Do you want to accept that bet?

Clearly, Mathematical Expectation, a cornerstone of gambling theory, money management and Economic Theory, must be utilized with the lens of a given horizon, a given lifespan. Hence the often-overlooked caveat in the definition provided earlier for Mathematical Expectation, "as you continue to play."

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GLOBAL EMERGING GROWTH CAPITAL

Investment Courses For Professionals

A sample of a growing list of fundamental and technical courses is shown below. The courses are associated with global destinations and dates, both for open and private client formats in 2008-9. They are produced by various knowledge vendors throughout the world (some listed below). Specific details can be provided by contacting them, or John Palicka (palicka@pipeline.com).

Taught by John Palicka CFA CMT

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Harry Dent: Economist and Technician

At his web site, www.hsdent.com, well known commentator Harry S. Dent offers a wealth of information about economics.

Since the late 1980s, Dent has provided economic forecasts based in part on studies of demographics and spending trends that affect the economy, stock prices, inflation, and interest rates. He has demonstrated that demographics also influence technological innovation cycles, product and industry trends, real estate, immigration and domestic migration, and new business models for management and organization.

On his web site, he explains that he bases his forecasts on:

1. **Predictable Spending Patterns at Different Ages and Stages of Life.** In his words, "The age and stage of life determine spending patterns. As we move through predictable stages of life, which correspond with different ages, we change our spending in very predictable ways. What we buy at each stage is predictable and consistent. This information can be used to forecast how spending will change in the years and decades to come." It can also be used to identify long-term investment trends.
2. **Who Spends What in the Economy and Its Demographic Impact.** For example, his research has identified a consumer lifecycle, shown in Figure 1.

Figure 1: The consumer lifecycle, combined with a study of demographic trends, can be used to forecast real estate trends, the impact of those trends on the economy, and the possible investment opportunities associated with that pattern.

3. **Birth Index and Immigration**, which he found reliably defines the long-term economic boom and bust cycle.
4. **The Spending Wave** predicts the health of our economy by moving forward the birth index 47.5 years. Dent's research indicates that is the average age at which consumers reach their predictable peak in spending. "By our mid-forties, the average American family has purchased the largest home we'll own and all the furnishings to go with it, and we spend money on clothing, food and education for our teenage children. Once the children leave the nest, the fixed costs remain the same but variable costs suddenly start dropping. Though this frees capital for discretionary spending, it marks the end of the necessary family spending that drives the economy." These predictable spending patterns drive the economy.

The Spending Wave chart shown, in Figure 2, illustrates the close correlation between the Birth Index, moved forward 47.5 years, and the Dow Jones Industrial Average adjusted for inflation. This Spending Wave can forecast stock market turning points nearly fifty years in the future. His data shows that the stock market, especially large company stocks, are the place to be when increasing numbers of a generation are moving to their peak spending years.

Figure 2: Dent's Spending Wave indicates a potentially extended trading range market.

5. **Inflation Indicator** which results from a surprising conclusion that inflation is largely driven by demographics, not monetary policy. Dent writes, "Economists think that inflation is largely a monetary phenomenon – more money chasing fewer goods. But this doesn't really make sense intuitively. If we doubled the money supply, then apples would cost twice as much, but we would have twice the dollars and we wouldn't feel poorer. Inflation only causes real pain when prices rise faster than incomes and reduce our standard of living. In reality, inflation is the economy's means of financing not only the new, young generations that will become highly productive in the future, but also

the new technologies these new generations bring.”

This approach is interesting, but as I reviewed the site, I wondered if it was technical analysis. My understanding of technical analysis is that we use data generated by the markets to forecast what is likely to happen in the future. Generally looking at price, volume or open interest (for futures), technicians have developed numerous indicators and patterns to gauge the relative forces of supply and demand to make these forecasts.

I concluded that Dent is an innovative market technician. He understands that supply and demand are determined by demographics and extends this from economic theory into practical stock market analysis. Another aspect of his work is cycle theory, a well known part of technical analysis. Dent seeks not only to exploit the cyclical trends evident to many technicians, but he is able to explain the likely underlying causes of these cycles through an understanding of demographics.

In the end, he offers a unique insight and practical information for market technicians. A thoughtful reading of his work could offer valuable insights to technicians, and could help them see the markets in a different light. In a constantly evolving field focused on day-to-day or even minute-by-minute analysis, Dent's approach also offers value as a long-term backdrop to any other type of analysis.

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Ralph Vince

By Yevgen Avramych

Recently I had the pleasure of speaking with Ralph Vince who has taken a rather unorthodox and ingenious approach towards trading. Ralph began his career when he was 20 years old working for a software firm that supported securities clearing. That firm was eventually bought by ADP.

His nonconformist journey began after he met the great trader Larry Williams, who helped him to look at trading differently. Ralph believes that in making our trading decisions there is really only one factor that we have complete control over - the size of a position. He has been able to build on this concept and apply it to a trading system which he created.

Ralph trades without trying to analyze the markets, basing his decisions solely on position size. The success of this approach is proven by the positive returns he has seen in his trading. Although this trading approach might seem a little unusual to some, its greatest benefit according to Ralph is that it allows him to work as a computer programmer, something that he loves doing, while not requiring his undivided attention towards the markets on a daily basis.

In Ralph's words, quantity-only systems basically function around a possible set of outcomes and allowable drawdowns for a given trade. Future position size is subsequently adjusted depending on whether a trade was successful or not. One of the major benefits of a quantity-only system is that it is very risk conscious therefore losses with such a system are very small.

He believes the worst possible scenario for his system is a flat market for an extended period of time. Such a scenario would create a situation with lost opportunity cost and nothing more. In order for a quantity-only system to function at maximum efficiency the optimum scenario would be a very volatile and liquid market. Recent volatility and the advent of very liquid ETFs which often trade hundreds of millions of shares a day has played right into the hands of Ralph's system.

Ralph thinks that this trading style is an evolutionary step in the study of technical analysis. He said, "My approach of quantity-only - timing and selection being arbitrary - is not an affront to technical analysis. Quantity is the necessary adjunct to your analysis; without which the best analyst is doomed to eventual failure. As such, it is another facet (albeit a major one, I believe) to technical analysis, and, ultimately, not only broadens the field, but provides a more solid foundation to it I think." The importance of quantity should always be stressed because even a winning system can suffer devastating losses if the size of positions is not managed properly.

A detailed explanation of Ralph's Leveraged Space Portfolio Model can be found on his website <http://parametricplanet.com/rvince/>. There is an excellent spreadsheet available there that illustrates the concepts. A Word document is also available which expands on the concepts.

Knowing how to wisely apply quantity in trading is very important but it does not necessarily mean that every analyst or trader should become a quant and learn to program according to Ralph. There are a number of very powerful trading programs available on the market which can be used to make better investment decisions. However, knowing and understanding what quantity to use when placing trades is important because it can be the difference between making money and losing everything. Even the most profitable systems can fail if drawdown risk is not taken into account and planned for appropriately. Studying the effects of quantity will benefit any trader. Not only will it provide greater risk awareness but it will also offer a more structured approach to decision making which will ensure longer term success.

To elaborate more on quantity based trading Ralph Vince recently wrote a book, *Reconciling Portfolio Management Strategies and Economic Theory*, which will be coming out shortly. Within his book he elaborates more on the Leveraged Space Portfolio Model and its application.

Ralph Vince is a computer programmer who got his start in the trading business as a margin clerk and later worked as a consultant programmer to large futures traders and fund managers. He currently consults with businesses and trading operations around the world and speaks frequently in front of professional and academic groups globally. Vince has been critically acclaimed for his groundbreaking work in money management, particularly in the development of Optimal f. He is the author of several books, including *The Handbook of Portfolio Mathematics*, *Portfolio Management Formulas*, *The Mathematics of Money Management*, and *The New Money Management*.



Yevgen Avramych works in the investment services area of Prudential Financial in New Jersey. He is a 2008 graduate of Seton Hall University, with a degree in Finance and minor in Economics. Yevgen has passed the level 1 exam of the CMT program.

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MTA Announcements

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Registration for the Fall 2009 CMT Examination is now open for all levels! The Fall 2009 testing window will be October 22nd - October 31st. It is our experience that those who wait until the end of registration to sign up, encounter difficulty securing their desired time, date and location, as this is available on a first come first serve basis. [Sign up today](#) to ensure your preferred time, date and location! Contact [Marie Penza](#), 646-652-3300, for information on the CMT Program and/or to schedule your exam. For detailed instructions on how you can register online, please [click here](#).

CMT Institute (CMTi) - Start Viewing the Archives Today!

The CMTi is an online CMT Exam prep course available to MTA Members and Affiliates only. This is a self paced study program with live review and prep sessions including access to CMTi Faculty and discussion groups. The classes will meet once a week and run for four consecutive weeks. All classes will be recorded and posted as an archive within 24 hours. In addition you will also receive the archived sessions from the previous test administration. For more information on the CMTi prep course, please visit the [CMT Institute](#) page on mta.org.

[Sign up today](#) to ensure ample preparation time, and gain instant access to valuable archived CMTi classes. Registration is easy! Simply head over to the [EVENTS](#) portion of our shopping cart. If you wish to register over the phone, please contact [Cassandra Townes](#) at 646-652-3300.

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Want to gain the recognition from your peers and the entire technical analysis community? Begin working on a research paper for the 2010 Charles H. Dow Award today! The competition for the 2010 Charles H. Dow Award is now open. The Award, which is the most significant writing competition in the field of technical analysis today, has been awarded annually since 1994. The Award is given to the research paper which is judged to contribute creativity, innovative thought and professional presentation to the study of technical analysis. Past recipients of the Award are among the fields most notable market technicians. Visit the [Dow Award](#) page on mta.org for more information, past award winning papers, and the 2010 Dow Award guidelines.

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- **Sign Up Now** - Tuesday, July 14th, Larry Pesavento, will present "*What it Takes to be a Professional Trader*." [Click here](#) to register for this webcast.
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The MTA is pleased announce the creation of the MTA Podcast Series. This Podcast Series will be a series of short interviews (scheduled to have one a week) between our MTA *Technically Speaking* e-Newsletter Editor, Mike Carr, CMT, and noted financial experts in the markets concerning a topic of current market relevancy. These podcasts, similar to the Educational Web Series, e-Newsletter, Journal, etc., will also be archived on our mta.org website and in our [Knowledge Base \(KB\)](#) for future referral by our membership. The first podcast will be available this afternoon, Wednesday, July 1st, and feature Cynthia Kase. For more information please visit the [Podcast Series](#) webpage.

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